(54) **CORDIERITE BODY**

(57) **ABSTRACT**

A ceramic comprising predominately a cordierite-type phase approximating the stoichiometry $Mg_2Al_4Si_5O_{18}$ and having a coefficient of thermal expansion (25–800° C.) of greater than 4×10^{-7}/° C. and less than 13×10^{-7}/° C. and a permeability and a pore size distribution which satisfy the relation 2.108 (permeability)+18.511 (total pore volume)+0.1863 (percentage of total pore volume comprised of pores between 4 and 40 micrometers)>24.6. The ceramic is suitable in the fabrication of cellular, wall-flow, diesel particulate filters having a pressure drop in kPa that at an artificial carbon soot loading of 5 grams/liter and a flow rate of 26 scfm is less than 8.9–0.035 (number of cells per square inch)+300 (cell wall thickness in inches), a bulk filter density of at least 0.60 g/cm^3 and a volumetric heat capacity of at least 0.67 J cm^{-3} K^{-1} as measured at 500° C.